What Is Claimed Is:

1   1. A method of generating an image using raster image processing, said image being

2   generated based on a specification specifying said image, said specification containing data

3   representing a plurality of objects, said method comprising:

4   implementing a plurality of approaches, with each approach being designed to generate

5   said image;

6   receiving said specification;

7   examining said specification to determine a number of resources required to generate

8   each of said plurality of approaches;

9   selecting one of said plurality of approaches which requires an optimal number of

10   resources;

11   generating said image from said specification using said selected one of said plurality of

12   approaches.

1   2. The method of claim 1, wherein said plurality of approaches differ at least in one of

2   rendering and screening, wherein said rendering and screening are contained in said raster image

3   processing.

1   3. The method of claim 2, wherein said plurality of approaches comprises two

2   approaches.

1   4. The method of claim 3, wherein said screening is performed using a back-end

2   screening in a first one of said plurality of approaches and using pipelined screening in a second

3   one of said plurality of approaches, wherein said rendering is implemented consistent with said

4   back-end screening in said first approach and with said pipelined screening in said second

5   approach.

1   5. The method of claim 4, wherein said examining comprises determining a minimum

2   duration of time consumed by either said back-end screening or said pipelined screening.

1   6. The method of claim 5, wherein a system implementing said method contains a

2   random access memory (RAM) and a cache, wherein said cache enables faster access to data to

3   a processing unit, said determining a minimum duration further comprises determining an

4   additional time required by said back-end screening approach due to storing rendered data in said

5   RAM.

1   7. The method of claim 5, wherein said determining a minimum duration further

2   comprises determining an additional time required by said pipelined screening due to the overlap

3   of objects contained in said specification for said image.

1   8. The method of claim 5, wherein a system implementing said method contains a

2   random access memory (RAM) and a cache, wherein said cache enables faster access to data to

3   a processing unit, wherein said determining a minimum duration further comprises determining

4   an additional time required by said pipelined screening when said processing unit accesses a

5   code in cache enabling implementation of said pipelined screening, and an instruction cache miss

6   results in accessing said code in said cache.

1   9. The method of claim 5, wherein a system implementing said method contains a

2   random access memory (RAM) and a cache, wherein said cache enables faster access to data to

3   a processing unit, said determining a minimum duration further comprises determining an

4   additional time required by said pipelined screening if a data structure for a desired tile size does

5   not fit in said cache, wherein said data structure is used in said pipelined screening.

1   10. The method of claim 1, wherein said specification is provided in a page description

2   language (PDL).

1   11. A system for generating an image using raster image processing, said image being

2 generated based on a specification specifying said image, said specification containing data

3 representing a plurality of objects, said system comprising:

4   means for implementing a plurality of approaches, with each approach being designed

5 to generate said image;

6   means for receiving said specification;

7   means for examining said specification to determine a number of resources required to

8 generate each of said plurality of approaches;

9   means for selecting one of said plurality of approaches which requires an optimal number

10 of resources;

11   means for generating said image from said specification using said selected one of said

12 plurality of approaches.

1   12. The system of claim 11, wherein said plurality of approaches differ at least in one of

2 rendering and screening, wherein said means for rendering and means for screening are

3 contained in said raster image processing.

1   13. The system of claim 12, wherein said plurality of approaches comprises two

2 approaches.

1   14. The system of claim 13, wherein said means for screening is implemented using a

2 back-end screening in a first one of said plurality of approaches and using pipelined screening

3 in a second one of said plurality of approaches, wherein said means for rendering is implemented

4 consistent with said back-end screening in said first approach and with said pipelined screening

5 in said second approach.

1   15. The system of claim 14, wherein said means for examining comprises means for

2 determining a minimum duration of time consumed by either said back-end screening or said

3 pipelined screening.

1   16. The invention of claim 11, wherein said system comprises a computer system.

1   17. A computer program product for use with a computer system, said computer program

2 product comprising a computer usable medium having computer readable program code means

3 embodied in said medium generating an image using raster image processing, said image being

4 generated based on a specification specifying said image, said specification containing data

5 representing a plurality of objects, said computer program product including:

6   computer readable program code means for implementing a plurality of approaches, with

7 each approach being designed to generate said image;

8   computer readable program code means for receiving said specification;

9   computer readable program code means for examining said specification to determine a

10 number of resources required to generate each of said plurality of approaches;

11   computer readable program code means for selecting one of said plurality of approaches

12 which requires an optimal number of resources;

13   computer readable program code means for generating said image from said specification

14 using said selected one of said plurality of approaches.

1   18. The computer program product of claim 17, wherein said plurality of approaches

2 differ at least in one of rendering and screening, wherein said computer readable program code

3 means for rendering and computer readable program code means for screening are contained in

4 said raster image processing.

1   19. The computer program product of claim 18, wherein said plurality of approaches

2 comprises two approaches.

1   20. The computer program product of claim 19, wherein said computer readable program

2 code means for screening is implemented using a back-end screening in a first one of said

3 plurality of approaches and using pipelined screening in a second one of said plurality of

4   approaches, wherein said computer readable program code means for rendering is implemented

5   consistent with said back-end screening in said first approach and with said pipelined screening

6   in said second approach.

1   21. The computer program product of claim 20, wherein said computer readable program

2   code means for examining comprises computer readable program code means for determining

3   a minimum duration of time consumed by either said back-end screening or said pipelined

4   screening.